‘Sealog’ Software V2.06 – User’s Manual

Introduction

The ‘Sealog’ data logger software is provided to interface a standard personal computer (PC) or laptop to the range of corrosion Sentries.

Using this software the ‘Sentry’ may be configured to the requirements of a specific application, the logged data recorded may be extracted and saved for further analysis or the data stored within the ‘Sentry’ may be erased.

Further details of this and other Seaguard products may be found by visiting our website at www.seaguard.co.nz

System Requirements

- 486 DX66 or faster IBM PC or compatible computer
- 256 Mbyte of RAM
- Windows 95, 98, 2000 or NT operating system

Operation

Initial Connection

- Connect the ‘Sentry’ to a spare serial port (COM1 or COM2) on the back of your PC or laptop using the data cable provided. If your PC has no serial port then a USB to serial converter may be used and the COM port selected accordingly.
- The software may be run from the disk provided or may be transferred to a suitable location on your hard drive.
- From the dropdown list provided at the bottom of the ‘Sealog’ screen, select the serial port being used on the PC.
- Ensure that the ‘Sentry’ is powered up and not ‘asleep’. If asleep all the lamps on the front of the unit will be turned off and it may be woken up by pressing the ‘test’ button.
- Once the ‘Sentry’ is awake and connected to your PC the status indicator will turn from flashing red to flashing green and the settings in use on the logger are read into the PC. Once this is complete the status bar will show steady green with a “Sentry Ready” indication.
- If the status bar does not turn green then check that the ‘Sentry’ is awake, that the data cable is correctly attached and that you have selected the correct serial (COM) port.

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Summary of Sealog pages

The data displayed by the logger software is distributed across two pages. A page may be selected and displayed by clicking on the 'tab' at the top of the appropriate page.

The following pages are currently available:-

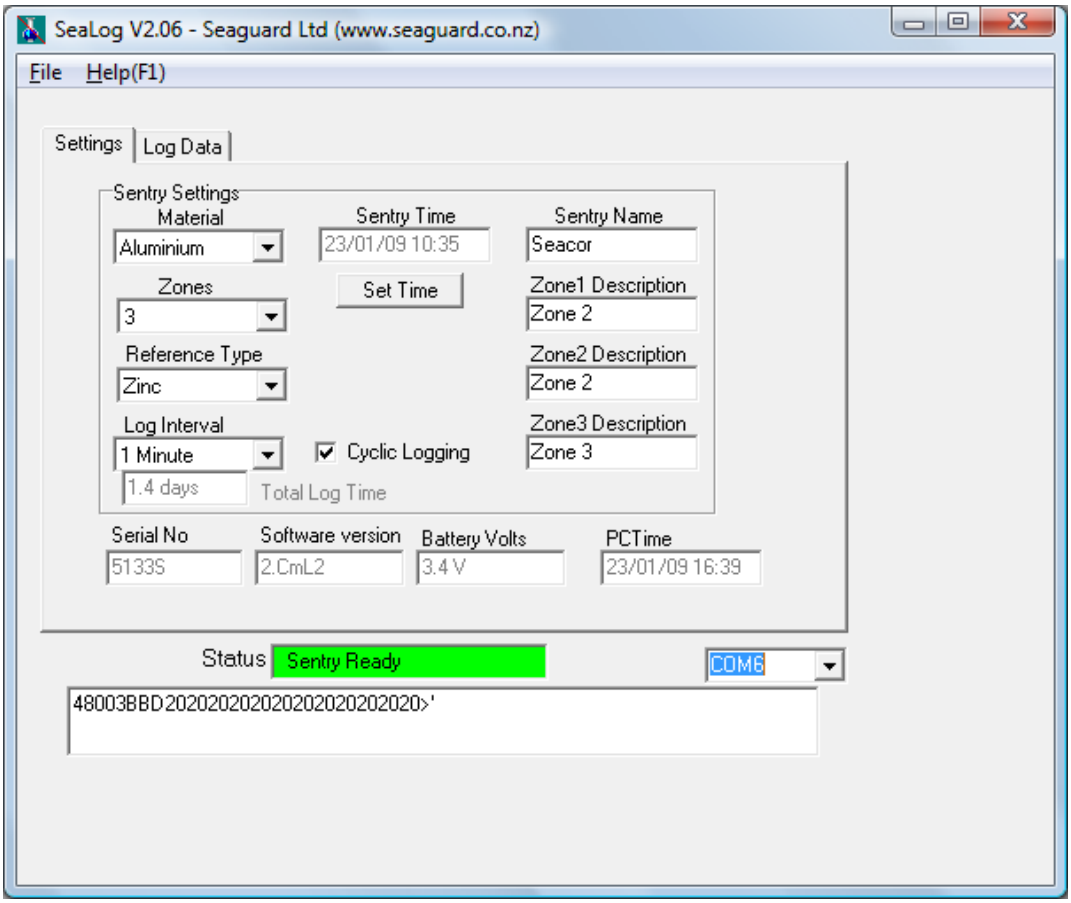
- 'Settings' – displays the current configuration settings from the attached 'Sentry' and allows these to be altered to suit the application.
- 'Log Data' – allows access to the logged data within the attached 'Sentry'. Data may be retrieved, stored to disk or cleared.

Details of these pages may be found in the following sections.

Controls and indicators on each page have 'hints' associated with them.
By positioning the cursor over one of these, a text description will be displayed.

'Settings' Page

The settings page may be used to adjust the operation of the 'Sentry'.
Each of these settings is described below and a screen shot of this page is provided.



Material: This indicates the primary material that is being monitored (usually the hull material). The setting may be altered by using the arrow at the right hand end of the box and selecting a new material. Currently 'Aluminium', 'Steel' and 'Bronze' are supported.
This setting determines how the lights on the front of the 'Sentry' operate.

Zones: This indicates the current number of zones (electrodes) that you have decided to connect to your 'Sentry'.
This value only determines how many zones are displayed on the LCD and LEDs. For example the display of zone 3 data will be skipped if this setting is set to '2'
All three zones are logged whatever the value used here.

Reference Type: This indicates the type of reference electrode that you have selected to use.
Currently 'Zinc' and 'AgAgCl' are supported.
This setting determines how the lights on the front of the 'Sentry' operate.

Log Interval: This setting determines how often the 'Sentry' will store a set of data.
Each set of data consists of the time and the minimum and maximum readings taken on each zone since the last set of data was stored.

If the logging period is set to storing a reading every two hours say, the **Sentry log** will take a reading every few seconds during that two hour period. Each reading is compared with previous readings and at the end of the two hour period, the maximum and minimum reading that occurred during that two hour period is stored. This approach to data logging ensures that important corrosion events are not missed.
Since each 'Sentry' has a fixed capacity to store data logs this number also determines how many days data may be stored before the log becomes full (the Total Log Time).
For example if the logging capacity of your 'Sentry' is 2,000 then by setting the period to 6 hours the log will fill in 2,000 x 6 hours = 12,000 hours or 500 days.

Total Log Time: This is an information field and cannot be changed. The time displayed here is calculated for you and indicates how long the 'Sentry' will accumulate data for before the log is full.
Some examples of typical log interval values are given below

Log interval	1 min	5 mins	1 hour	6 hours	12 hours	24 hours
Log cycle -511	8 hours	42 hours	21 days	4 months	8 months	1.25 years
Log cycle -2000	32 hours	7 days	83 days	16 months	2.5 years	5.5 years
Log cycle -4000	64 hours	14 days	166 days	32 months	5.5 years	11 years

Cyclic Logging: Checking this box causes the **Sentry log** to continue to take data, overwriting the oldest existing data, after the Total Log Time has elapsed. If the Cyclic logging box is not checked, then logging will stop and the LCD will display 'OFF' once the data log is full.

Sentry Time and Set Time: 'Sentry Time' displays the current time set within the 'Sentry'. This time is stored along with the data every time a set of data is logged.
By pressing the 'Set Time' button the 'Sentry' time is adjusted to match the time on your PC.

Sentry Name: This is a text field which may be up to 16 characters in length and is stored within the 'Sentry'. This can be changed at any time by clicking the mouse over the text in the field, deleting the data already present and retyping the desired name. The boat name is normally chosen for this field. It is important to set this since all data saved on the PC has a description of the 'Sentry' as a part of the header and the Sentry Name appears in this header so that the data may be easily identified at some later date.

Zone1 Description: This is a text field like the Sentry Name which may be changed in the same manner. The area of the boat being monitored should be chosen for this field eg "Hull", Port Waterjet", "Stbd Seachest"…. As above it is important that a meaningful description is entered.

Zone2 Description & Zone3 Description: See Zone1 Description.

Serial Number: This is a read only field and cannot be changed by the user. It displays the unique serial number of your 'Sentry'. This should be quoted in any enquiries.

Software Version: This is a read only field and cannot be changed by the user. It displays the version number of the software fitted to your 'Sentry'. This should be quoted in any enquiries.

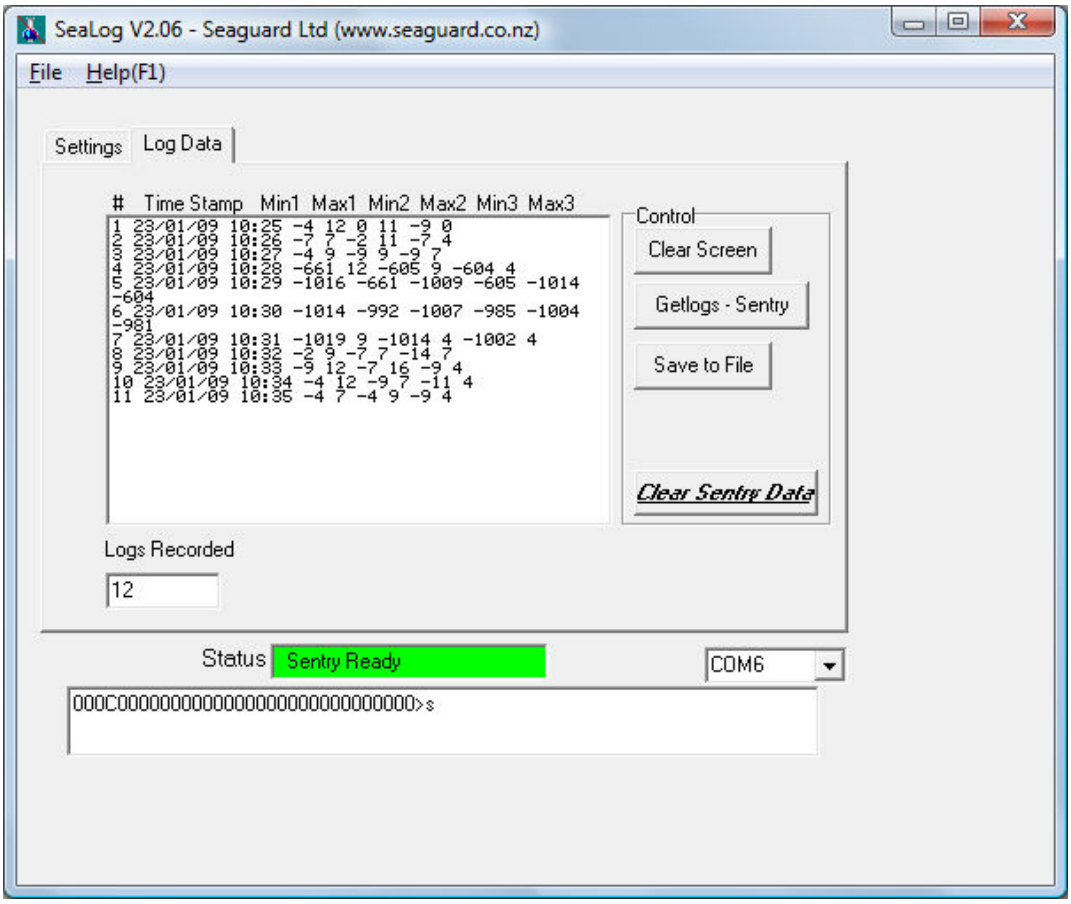
Battery Volts: This is a read only field and cannot be changed by the user. It displays the current battery voltage. New alkaline batteries will have a voltage of about 4.8 Volts. The unit is designed to operate down to 2.7 Volts. Once the voltage has dropped below 3.2 volts then a new set of batteries should be fitted.

PC Time: This is a read only field and cannot be changed by the user. It displays the current time set on your PC. This time will get transferred to the 'Sentry' if the Set Time button is pressed.

Status: The status bar at the bottom of the page provides the user with a visual feedback of 'Sentry' and 'Sealog' activity. Both the color and the description indicate what is happening.
In general terms the color changes as follows:-

Steady green = All is well
Flashing green = 'Sentry' is busy.
Flashing Red = 'Sentry' is not communicating

‘Log Data’ Page



Clear Screen: Pressing this button clears only the data in the central data window. It does not clear data with the ‘Sentry’.

Get Logs - Sentry: Pressing this button clears the screen and requests a file name and location in which to store the data. Once entered the process of retieving all data logs from the ‘Sentry’ is started. At this point the button changes to ABORT Get Logs which as the name implies causes the process to be abandoned immediately.
Each log is displayed in the data window once is has been retrieved.
During log retrieval a progress counter is displayed within the Status bar.

Save To File: Pressing this button opens a dialogue box allowing you to select a file name and location for the retrieved data displayed within the data window.

Clear Sentry Data: Pressing this button brings up a warning message which, if accepted, will permanently clear all logs stored within the 'Sentry'

Logs Recorded: This is a read only field and cannot be changed by the user. It indicates the total number of logs recorded since the last time that the 'Sentry' data was cleared. This counter does not stop when the data log is full but continues to increment each time a new log is stored.

Interpretation Of Data

Data retrieved from a 'Sentry' may be viewed in a number of different ways.

- The values may be viewed as a list within the 'Log Data' page.
- The data may be saved to a text file. From here the data is easily imported into any standard spreadsheet or word-processor package where it may be further analyzed.
- The data file may be sent to us at Seaguard where we will import it into an Excel Spreadsheet, generate a graphical display of the data and return it to you. This service is free for the first 12 months after purchase.

Readings can be evaluated from the table below for Seaguard zinc electrodes and typical materials in use in the marine sector. For Ag AgCl reference electrodes, subtract 1000 from the numbers below:

Material	Freely corroding	Protected	Over protected
Carbon steel	+390	+150	
304 Stainless steel (active)	+470	+230	
Aluminum	+260	+50	-100
Bronze	+680	+350	
Brass	+640	+310	

For further details on corrosion data see our website at www.seaguard.co.nz